Scholars World
INTERNATIONAL PEER REVIEWED REFEREED MULTIDISCIPLINARY
JOURNAL OF CONTEMPORARY REASERCH
Impact Factor: 4.433
Online ISSN: 2320-3145, Print ISSN: 2319-5789

Student's Contribution to Environmental Sustainability in Ahilyanagar District: A Geographical Analysis

Dr. Baban Arjun Avhad

Dept of Geography, Associate Professor
Mahilaratna Pushpatai Hiray Mahila Mahavidyalaya Malegaon Camp, Dist- Nashik

Abstract:

Sustainable development is essential for balancing economic growth, environmental protection, and social equity, ensuring long-term prosperity without depleting natural resources for future generations. In this context, the present research paper attempts to examine the contribution of students toward sustainable development in the Ahilyanagar district. Students from various higher education institutions in the study area play a significant role in promoting sustainable development through different community engagement programmes conducted in both rural and urban areas. The present study focuses on examining students' participation in the conservation of natural resources, their involvement in ecological movements, and their contribution to community-based environmental actions across the Ahilyanagar district. Students actively participate in initiatives such as tree plantation drives, water conservation activities, waste management campaigns, and awareness programmes related to environmental protection and sustainability. Through these activities, students contribute to strengthening environmental awareness and encouraging sustainable practices within local communities. The study adopts a mixed-method research approach, which includes primary data collected through surveys and interviews with students, along with secondary data obtained from the District Statistical Abstract and other official sources. This combination of qualitative and quantitative data helps to provide a comprehensive understanding of students' involvement in sustainable development initiatives. The findings of the study highlight the geographical patterns of community engagement and the socio-cultural factors influencing students' participation in environmental sustainability Programmes. The results indicate that students act as crucial agents of sustainable development by actively supporting environmental conservation efforts. Their contributions are particularly significant in areas such as rural resource management, urban waste management initiatives, and the preservation and promotion of traditional ecological knowledge.

Keywords: Community Engagement, Waste Management, Geographical Pattern, Resource Management, Sustainable Development

Introduction:

Environmental sustainability has emerged as a critical global issue in the 21st century. While policies and technological solutions play essential roles, social actors, particularly students, play a vital role in ecological conservation. Ahilyanagar district, located in Maharashtra, is one of the most geographically and culturally diverse districts in the state. It is home to the mountain ranges of the Western Ghats, urban centers such as Ahilyanagar, Sangamner, and Shrirampur, as well as agricultural sugarcane belts. Several higher educational institutions are located in this district, and students from these institutions actively contribute to environmental sustainability in various ways, such as through watershed management in tribal areas, eco-clubs in urban schools, community engagement programs in rural areas, and forestation efforts. This close connection with the natural world uniquely positions students to become its stewards. This paper explores the role of students in promoting environmental sustainability in Ahilyanagar district.

Objectives:

1. To identify students' contributions to environmental sustainability.
2. To understand how geography (rural vs. urban, plain vs. highland) influences student involvement in environmental initiatives.

3. To highlight the intersectional challenges that students face in their efforts toward environmental sustainability.
4. To suggest policy recommendations for strengthening student involvement in ecological conservation.

Study Area:

The study area encompasses the entire Ahilyanagar district in Maharashtra, located in western India, which displays significant geographical diversity that influences environmental conditions and sustainability practices. The district stretches from the dry, arid regions in the southern boundaries near Beed and Solapur, to the agricultural sugarcane belt in the north near Nashik, and eastward towards Sambhajinagar. The elevated escarpments of the Western Ghats extend to the northwest.

This physical diversity results in varied climatic patterns, soil types, vegetation cover, and resource availability. The northwestern region receives heavy monsoonal rainfall, supporting dense forests and rich biodiversity, but faces challenges such as soil erosion. The Western Ghats, recognized as a biodiversity hotspot, are grappling with issues like deforestation, landslides, and habitat degradation. In contrast, the Ahilyanagar Plateau experiences lower rainfall, droughts, groundwater depletion, and agrarian distress. Rapid urbanization and industrialization, particularly in centers like Ahilyanagar, Sangamner, Shirdi, and Shrirampur, have intensified problems such as solid waste management and air pollution. Meanwhile, the southern part of the district suffers from severe water scarcity. These contrasting environmental conditions across regions significantly shape local sustainability priorities and influence the nature of student participation in environmental conservation activities throughout the district.

Methodology:

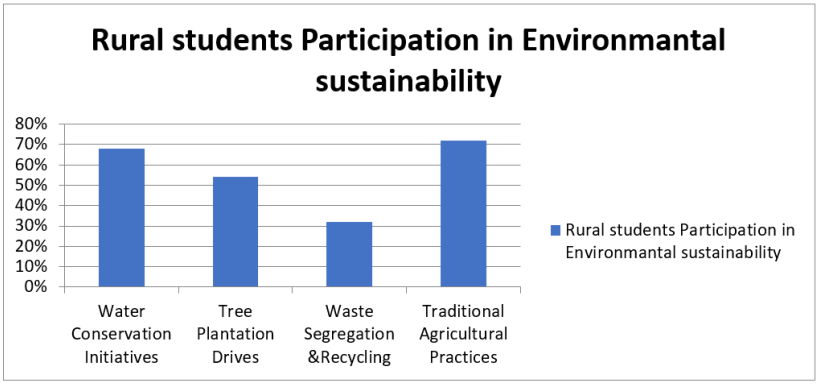
Research Design: Mixed methods approach (Quantitative surveys + Qualitative interviews).
Primary Sampling: Students aged 18-22 across the Ahilyanagar district.
Data Collection Tools:
Questionnaires: 100 respondents.
Semi-structured interviews with key informants (student leaders, NGO workers).
Data Analysis:

- Descriptive statistics (percentages, mean scores).
- Thematic analysis of interviews.
- GIS mapping to analyze geographical variation in sustainability efforts.

Results:

Participation in Environmental Activities

Activity	%Rural students	%Urban Students
Water Conservation Initiatives	68%	42%
Tree Plantation Drives	54%	61%
Waste Segregation &Recycling	32%	76%
Traditional Agricultural Practices	72%	28%

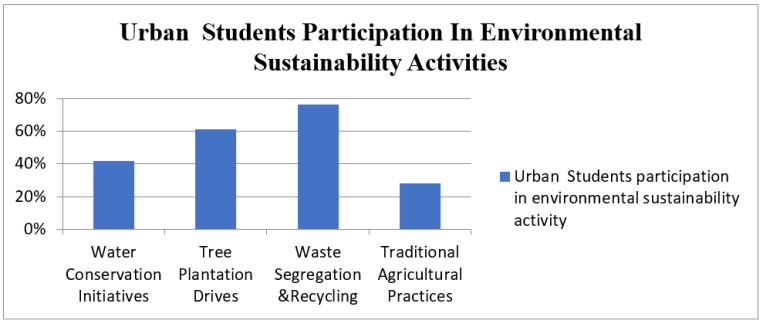


Key Observations:

Rural students demonstrate greater involvement in natural resource management activities, such as water conservation, agriculture, and land-based practices. In contrast, urban students are more actively engaged in solid waste management and recycling initiatives.

Regional Patterns:

Mountain Areas: Students play a leading role in community forestry and biodiversity conservation efforts, actively participating in forest protection and awareness programs.
Ahilyanagar Plateau: Students are engaged in traditional water harvesting practices, contributing to sustainable water management in drought-prone areas.
Urban Centers (Ahilyanagar, Sangamner, Shirdi, Shrirampur): Eco-clubs and urban clean-up campaigns are more prominent, with notable participation and leadership by women students.
Rural Areas: Student groups focus on drought-resistant farming techniques, water conservation, and sustainable agricultural practices.



Discussion:

Socio-Cultural Drivers:

Students are generally regarded as educated, energetic, and socially responsive groups, making them important contributors to environmental sustainability. Platforms such as National Service Scheme (NSS) units across various educational institutions, along with student-led organizations, often serve as catalysts for environmental action. These platforms encourage participation in activities such as tree plantation, awareness campaigns, and community-based conservation programs.

Barriers:

Despite their active involvement, students face several constraints. Academic commitments and time limitations due to college responsibilities often restrict their sustained participation in environmental initiatives. Additionally, a lack of technical training and specialized knowledge limits their engagement in advanced environmental programs, such as climate modeling, biodiversity assessment, and sustainable technology implementation.

Geographical Influences:

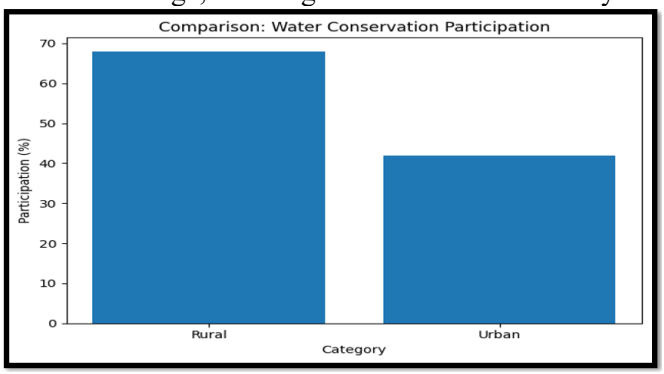
Geographical conditions significantly shape the nature of student involvement:

- In water-scarce regions, students actively lead watershed management projects and water conservation initiatives.
- In mountainous areas, students are more involved in forest conservation, soil preservation, and biodiversity protection.
- In rural areas, students contribute to sustainable agriculture and resource management practices based on local ecological needs.

The intersection of students and the environment represents a critical area of study, particularly in a country like India, where a large proportion of the population depends directly on natural resources for their livelihoods. Environmental degradation and climate change disproportionately affect students, especially in rural areas. Many students take on responsibilities such as collecting water, assisting their families in agricultural work, or engaging in part-time jobs to support their education and household needs.
However, this close interaction with the natural environment also uniquely positions students as potential custodians of ecological sustainability. Their lived experiences foster a deeper understanding of environmental challenges and encourage practical, community-based solutions.
The study region, characterized by diverse agro-climatic zones, faces several environmental challenges, including recurrent droughts, water scarcity, and increasing plastic pollution. Within this broader context, Ahilyanagar district presents a compelling microcosm. Located between the ecologically sensitive Western Ghats and the drought-prone rain shadow region, the district reflects both environmental vulnerability and innovative grassroots responses.

Students in Watershed Management:

Student groups in the district actively participate in watershed development activities, including check-dam renovation, contour bunding, and community water budgeting. These efforts contribute to improved irrigation practices, groundwater recharge, and long-term water sustainability in drought-prone areas.



Recent Developments in Student Environmental Leadership:

One of the most recent frontiers of student environmental leadership in Ahilyanagar district is waste management. In 2025, the All India Institute of Local Self-Government (AIILSG) launched the "Localising Plastic Action through Communities (LPAC)" project in the district. This initiative aims to actively engage women's Self-Help Groups (SHGs) and student volunteers, particularly National Service Scheme (NSS) members, in the plastic waste management value chain.
The project focuses on training students to collect, clean, and segregate multi-layered plastic (MLP) waste, which is otherwise economically unviable to recycle. It also aims to equip them with skills to upcycle plastic waste into marketable products such as bags, pouches, and clutches, in collaboration with designers and retailers. This initiative not only addresses plastic pollution but also creates alternative livelihood opportunities for students and local communities.

Water Conservation Initiatives:

- **Coro India Project (Parner Taluka):**
  Students were trained as "water leaders," conducted village meetings, and implemented Continuous Contour Trenches (CCTs). As a result, villages like Ralegan and Hiware Bazar became drought-resilient, groundwater levels increased by 14–15 feet, and 48 students received training.
- **Springshed Development Project (Ralegan and Hiware Bazar):**
  Students supported the formation of SHGs, which received financial assistance (₹1 lakh each), and participated in plantation drives. These efforts led to spring rejuvenation, expansion of

cultivable land, and financial empowerment of SHGs. Students played a key role in activities such as check dam construction, nala bunding, water conservation, and forestation.

Urban Waste Management:

In urban areas of the district, student volunteers have implemented neighborhoods recycling programs, composting workshops, and environmental awareness campaigns. These initiatives have contributed to improved waste segregation practices and increased public awareness.

Other Key Initiatives:

- **Sustainable Agriculture (MMF & SATHI Projects):**
  Around 120 students were trained in organic farming, mushroom cultivation, and financial literacy. These efforts resulted in increased household income, improved food security, and wider adoption of sustainable agricultural practices.
- **District Waste Management Project (Ahilyanagar Administration):**
  Students are being trained in plastic waste collection, segregation, and upcycling. This initiative contributes to reducing landfill waste while generating alternative livelihood opportunities.
- **Institutional Support (LRA/IWMP Programs):**
  A total of 368 SHGs and 189 user groups have received skill training and bank linkage support. These efforts have strengthened livelihood development and market access.
- **Youth Leadership (Sanskruti Initiative):**
  Student-led groups mobilized communities and organized shramdaan (voluntary labor) for constructing CCTs. This improved water retention, transformed community attitudes, and inspired greater participation, especially among young women.

Policy Recommendations:

1. Ensure formal inclusion of students in environmental policy councils and decision-making bodies.
2. Promote capacity building and skill development in green technologies for students.
3. Provide financial support for student-led environmental enterprises (e.g., organic agribusiness).
4. Encourage student-responsive public environmental campaigns and awareness programs.

Conclusion:

Students in Ahilyanagar district significantly contribute to environmental sustainability, with their roles shaped by geographical conditions and socio-cultural contexts. Recognizing and empowering these contributions can enhance regional environmental resilience. Future policies should strategically integrate student voices and participation into ecological planning and sustainable development initiatives.

References:

1. Kanhaiya and Sharda- Sustainable Education System Pg-46-49
2. Maharashtra State Environmental Reports (VariousYears).
3. Field data collected (2025).
4. Socio-Economic Abstract of Ahilyanagar Districts(Various Years)
5. www.ahilyanagar.nic.com